

Sustainability at the SMM Group Management Approach

Solving Social Issues through Business

Drawing on the Sumitomo Business Spirit that has been passed down for 430 years since our founding, our Group has consistently endeavored to solve social issues through business, calling for respect for all individuals and sustainable co-existence with the global environment in our Corporate Philosophy.

We systematized past social- and environment-related activities as CSR activities in 2008, and since then have advanced such activities primarily through the CSR Committee that is chaired by our president.

As our Vision for 2020, which formed the foundation for these activities, had reached its target year, in March 2020 our Group formulated and announced the new Vision for 2030 as a milestone on the way to our long-term vision of being the “world leader in the non-ferrous metals industry.”

Through our efforts to achieve Vision for 2030, we will aim to solve social issues, enhance our corporate value, and make our long-term vision a reality.

Promotion Structure

The SMM Group promotes the Group’s sustainability activities—that is, CSR activities—primarily through the CSR Committee. Meeting twice a year, the CSR Committee is chaired by the president, with the CSR executive officer participating as deputy chair, the general managers of divisions, the General Manager of the Technology Division, the General Manager of the Engineering Division, and the heads of operational divisions in the Head Office as committee members, and the CSR Department as secretariat. Specifically, we deliberate and decide on CSR policy, material issues, and proposals to modify

the Vision for 2030. In addition, we also discuss and finalize indicators for evaluating our progress toward the Vision for 2030 and important matters regarding CSR activities, such as those in our annual CSR activity plans. Other activities include regular evaluations of CSR activities and the launch of corrective measures, as well as the provision and exchange of information regarding the promotion of CSR activities, explanations of important issues, sharing of understanding, and deliberation of important themes concerning CSR activities. Through such deliberations by the CSR Committee, we evaluate the progress and performance of CSR activities, review and rework activity plans for the next fiscal year, and carry out the PDCA cycle.

As subordinate organizations, the CSR Committee has set up seven CSR subcommittees corresponding to material

issues and three working groups: the Risk Management Working Group, Compliance Working Group, and Quality Assurance Working Group. Both the seven CSR subcommittees and the three working groups fall under the oversight of relevant divisions, and set and carry out annual goals and plans in line with KPIs set for individual themes. The seven CSR subcommittees in particular are cross-company organizations with members drawn from business divisions and corporate divisions. These subcommittees engage in CSR activities integrated with our business.

As an internal control and supervisory function for our CSR activities, the Board of Directors conducts regular or occasional deliberations on the Company’s medium- to long-term issues.*

*See p. 94–101.

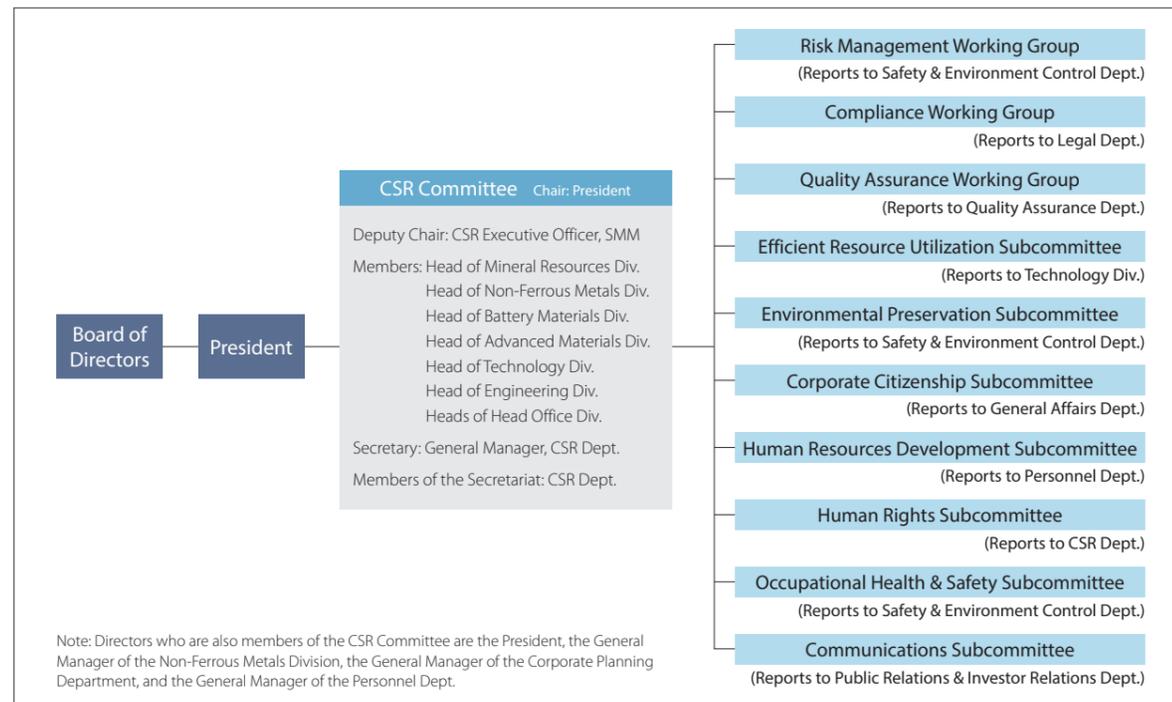
The Process of Formulating Vision for 2030 (Including Identification of Material Issues and Setting of KPIs)

To formulate Vision for 2030 and achieve sustainable value creation, we considered issues remaining from Vision for 2020, and took into account our response to climate change, global human rights, and other needs of stakeholders and society. We also considered issues such as the rapid development of IoT and digitalization for which materials industry

trends have greatly changed, as well as connections to the SDGs, which have the same target year of 2030, and undertook a full change of the Vision. In addition, we listened to the opinions of our officers and employees while also heeding outside experts, and underwent an extensive process of deliberations.

CSR Policy

1. SMM shall work to combat global warming by promoting recycling and effective resource utilization while also targeting technological innovation and continuous improvements in energy efficiency.
2. SMM shall promote sustainable co-existence with society by respecting the needs of the local communities in which we operate around the world.
3. To continue sound business activities, SMM shall respect human rights and shall try to be a company in which diverse human resources take active parts.
4. According safety the highest priority, SMM shall provide safe, comfortable working environments and seek to eliminate occupational accidents.
5. SMM shall strengthen communications with all stakeholders to build healthy, trust-based relationships.



STEP 1 Identification of sustainability issues

From April 2018, having summarized outlooks for conditions in 2030 by the OECD and other organizations and international guidelines such as ICMM guidelines and GRI Standards, and having identified 89 sustainability issues, we worked to connect these issues with closely related SDG targets.

STEP 2 Identification of material issues through evaluation of the materiality of sustainability issues

To identify material issues from the identified 89 issues, from October 2018 we began evaluations on two axes: evaluation by CSR subcommittees from social perspectives and evaluation by business divisions from business perspectives.

As standpoints for evaluation, we set three points—(1) degree of impact on society, (2) risks that threaten to increase if not actively addressed, and (3) opportunities gained if actively addressed—and evaluated these on a five-step scale.

We further held study sessions by a total of 21 young managerial track employees in general positions and 20 factory leaders in the Besshi District, and used their opinions as reference in examinations by the CSR subcommittees.

STEP 3 Examination of the vision and KPIs

From April 2019, we began examination of the vision and of specific KPIs in CSR subcommittees corresponding to the 11 material issues. In July 2019, based on the examination by the CSR subcommittees, we held deliberations by officers, and carried out final examinations through the CSR Committee (chaired by the president).

STEP 4 Formulation and release of Vision for 2030

In December 2019, the CSR Committee convened to issue its approval of Vision for 2030 and its KPIs, which, following resolution by the Board of Directors, led to formulation and announcement of the vision in March 2020.

Vision for 2030, Material Issues, KPIs (Indicators and Goals)

1 Effective Use of Non-Ferrous Metal Resources

Vision for 2030: A company that generates resources through high technological capabilities

1. A company that stably provides non-ferrous metals to society
2. A company that contributes to society by effectively using impurities through collaborative, open technological development among industry, academia, and government
3. A company that contributes to the construction and maintenance of recycling systems for non-ferrous metals
4. A company that develops and supplies highly advanced materials that contribute to the resolution of social issues

KPI	Indicators	Goals
1. 1)	Advance copper mine projects	<ul style="list-style-type: none"> Strengthen production structure at JV mines to achieve and maintain copper production level of 300 kt/year from interests Achieve steady copper production level by reinforcing exploration of surrounding and deep areas in JV mines, expanding mineral processing technology, and improving operations leveraging IoT and AI Advance Phase 2 and later projects at the Quebrada Blanca Copper Mine
2)	Acquire new superior copper and gold resources	<ul style="list-style-type: none"> Develop new mines for which we have operatorship
3)	Improve productivity by introducing new technology	<ul style="list-style-type: none"> Promote remote operation and unmanned operation of heavy machinery and information infrastructure equipment inside and outside of the Hishikari Mine
4)	Advance nickel ore projects and improve productivity	<ol style="list-style-type: none"> (1) Nickel production: 150 kt/year (2) Recovery rate compared to FY2018: +2%
2. 1)	Develop technology to separate, stabilize and bleed off, and create value from impurities generated by smelting processes and mines	<ul style="list-style-type: none"> Develop technology to stabilize and bleed off impurities: Develop and demonstrate the process
2)	Develop technology to create value from unused non-ferrous metal resources	<ul style="list-style-type: none"> Contribute to existing (e.g. marine resource development) and new development projects
3)	Recover non-ferrous metals from hard-to-process resources	<ul style="list-style-type: none"> Participate in business and technology for recovery of lithium from salt-lake water in the presence of high levels of impurities
3.	Demonstrate and commercialize automobile secondary battery recycling technology	<ul style="list-style-type: none"> Demonstrate, commercialize, and expand scale of recycling technology that recovers cobalt from automotive lithium-ion batteries Commercialization: 2022
4. 1)	Leverage our strengths to create new products and new businesses that contribute to society	<ul style="list-style-type: none"> Research, develop, and commercialize new advanced materials in the fields of energy, automobiles, and information communications
2)	Hold raw materials in-house for favorable and stable procurement	<ul style="list-style-type: none"> Commercialize NiO for fuel cells following demonstration project
3)	Expand sales of low-cost battery cathode materials through favorable, stable procurement of our own nickel raw materials	<ul style="list-style-type: none"> Maintain top class global share in the expanding cathode materials market

2 Climate Change

Vision for 2030: A company that actively undertakes climate change countermeasures, by reducing emissions and stably supplying products contributing to a low-carbon society, a future with zero greenhouse gases (GHGs)

KPI	Indicators	Goals
Reduce GHG emissions		<ol style="list-style-type: none"> 1. Keep total GHG emissions below that of FY2013 and formulate a plan to reduce our emissions to zero in the second half of the century 2. Cut GHG emissions intensity by at least 26% compared to FY2013 3. Expand contribution of GHG reduction by products contributing to a low-carbon society: 600 kt-CO₂ or more

3 Significant Environmental Accidents 4 Biodiversity

Vision for 2030: A company that values water resources and biodiversity, and protects the richness of the sea and land

KPI	Indicators	Goals
1. Zero significant environmental accidents		<ol style="list-style-type: none"> 1) Promote improvements through the use of risk management and environmental management systems 2) Reinforce and improve equipment and infrastructure to address increases in sources of natural hazard
2. Reduce emissions of hazardous substances (year-on-year)		<ol style="list-style-type: none"> 1) Optimize water use; reduce emissions of hazardous substances to the atmosphere and water 2) Promote various environmental preservation and biodiversity preservation activities, such as regular reforestation

5 Employees' Occupational Health and Safety

Vision for 2030: A company where all employees work together with safety first the priority in a comfortable working environment as well as safe facilities and operations

KPI	Indicators	Goals
1. Prevent occupational accidents		<ul style="list-style-type: none"> Serious accidents: zero (in Japan and overseas, including contractors) All accidents: reduce year-on-year, with aim of eventually zero
2. Prevent occurrence of occupational diseases		<ul style="list-style-type: none"> Number of workplaces that present higher health risks: reduce year-on-year Occurrence of occupational diseases: zero

6 Diverse Human Resources

7 Development and Participation of Human Resources

Vision for 2030: A company where all employees can take a vibrant and active part

1. A company that respects the humanity of each and every employee, and where employees feel pride, motivation, and joy in work
2. A company that provides each and every employee with opportunities to improve his/her capabilities, and grows together with employees

KPI	Indicators	Goals
1. Promote working style reform and create workplaces that make use of digital technology, enabling diverse human resources to play vibrant and active roles		<ol style="list-style-type: none"> 1) Improve scores for "Management by managers and superiors," "Appeal of job," and "Work environment" in employee awareness survey 2) (1) Number of female managers: 50 (SMM employees) (2) Increase workplaces open to women and improve ratio of female employees (20% or higher at Japanese sites) 3) Expand number of managerial track employees of foreign nationality 4) Percentage of employees with disabilities: 3% or higher 5) Assign jobs and provide support matched to employees' life stages
2. Support employees' mental and physical health		<ol style="list-style-type: none"> 1) Halve the number of people found to require support in stress checks 2) Percentage of employees with abnormal findings indicated in health checkups: 50% or lower
3. Diversify opportunities to enhance the abilities of employees according to employee needs and work needs		<ol style="list-style-type: none"> 1) Utilize one-on-one meetings that bring out the motivation and potential of every employee and boost the growth of subordinates through regular dialogues between superiors and subordinates 2) Reconstruct the human resources development program (in-house education, external education, etc.) to provide opportunities to employees to enhance their abilities in line with their roles 3) Provide opportunities for self-development matched to each employee's life plans and needs (correspondence courses, online training, etc.)

8 Engagement with Stakeholders

Vision for 2030: A company that is appreciated and understood to be the world leader in non-ferrous metals

KPI	Indicators	Goals
1. Further penetrate our Group brand among employees		<ul style="list-style-type: none"> Improve results of employee awareness survey (increase ratio of employees who feel pride in working at the Company)
2. Ensure quality and quantity in communication of information at the level of "world leader in the non-ferrous metals industry"		<ul style="list-style-type: none"> Earn a high reputation for the integrated report from outside the Company (including hearings with shareholders and investors, and improvements in questionnaire and evaluation results)
3. Increase in recognition and understanding of our goal of "world leader in the non-ferrous metals industry"		<ul style="list-style-type: none"> Improvement in findings of surveys by external bodies (degree of recognition and understanding, etc.)

9 Co-Existence and Mutual Prosperity with Local Communities

Vision for 2030: A company that contributes to regional development and earns trust as a member of the local community

KPI	Indicators	Goals
Participate in local communities through dialogue and collaboration		<ul style="list-style-type: none"> Accurately identify local issues through dialogues with local communities, and execute the following measures
1. Support the local community via employee participation		<ul style="list-style-type: none"> Implement employee participation programs (from 2023)
2. Hire and procure locally		<ul style="list-style-type: none"> Continually implement and assess of performance
3. Support for nurturing of the next generation		<ol style="list-style-type: none"> 1) Implement programs to nurture the next generation in collaboration with government, local bodies, NPOs, etc. (one or more times/year) 2) Establish and award scholarships in Japan and maintain existing overseas scholarships (from 2023)
4. Support for people with disabilities and the elderly		<ul style="list-style-type: none"> Implement programs to support people with disabilities and the elderly in collaboration with government, local bodies, NPOs, etc. (one or more times/year)
5. Support during disasters		<ul style="list-style-type: none"> Support regions affected by large-scale disasters

10 Rights of Indigenous Peoples

Vision for 2030: A company that understands and respects the traditions and culture of indigenous peoples

KPI	Indicators	Goals
1. Understand indigenous peoples and their traditions and culture		<ul style="list-style-type: none"> Percentage of SMM Group sites implementing in-house education: 100% by the end of FY2023
2. Support initiatives that lead to respect for the traditions and cultures of indigenous peoples		<ol style="list-style-type: none"> 1) Provide scholarships for indigenous peoples (continue existing initiatives) 2) Support indigenous people-related initiatives by NGOs, academic societies, etc.: one initiative or more each year

11 Human Rights in the Supply Chain

Vision for 2030: A company that undertakes responsible sourcing across the supply chain

KPI	Indicators	Goals
Promote responsible sourcing, particularly responsible mineral sourcing		<ol style="list-style-type: none"> 1. Responsible mineral sourcing <ol style="list-style-type: none"> 1) Establish a responsible mineral sourcing management system in line with international standards by the end of FY2021 2) Zero mines or smelters and refineries complicit in child labor or other infringements of human rights in the supply chain 2. Responsible sourcing <ol style="list-style-type: none"> 1) Business partners that have received and agreed with the SMM Group Responsible Sourcing Policy: 100% by the end of FY2030 2) Establish a responsible sourcing management system in line with international standards by the end of FY2024 3) Continue implementing due diligence (DD)

1 Effective Use of Non-Ferrous Metal Resources

Efficient Resource Utilization Subcommittee: For details on our subcommittee framework, etc., see p. 64–65

Approach and Policy

We aim to contribute to realizing a sustainable society by using our production capabilities as a foundation for carrying out research and development that includes collaboration with external parties. We will also aim to enhance our technological capabilities related to product creation and advance various initiatives such as realizing a stable supply of non-ferrous metal resources, creating value from unused resources, and utilizing technologies for recovering and recycling hard-to-process resources.

Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company that generates resources through high technological capabilities

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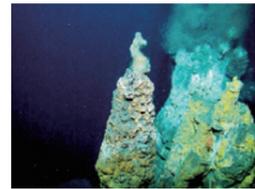
KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
1. 1) Advance copper mine projects <ul style="list-style-type: none"> Strengthen production structure at JV mines to achieve and maintain copper production level of 300 kt/year from interests Achieve steady copper production level by reinforcing exploration of surrounding and deep areas in JV mines, expanding mineral processing technology, and improving operations leveraging IoT and AI Advance Phase 2 and later projects at the Quebrada Blanca Copper Mine 	<ul style="list-style-type: none"> We maintained operations at JV mines in North and South America despite limitations accompanying the COVID-19 pandemic response. Construction of Phase 2 of the Quebrada Blanca Copper Mine was suspended in March 2020 due to the COVID-19 pandemic but restarted once safety measures were put in place. 	<ul style="list-style-type: none"> Gather JV mine information. Implement COVID-19 anti-infection measures. 	<ul style="list-style-type: none"> Continue to gather information through technical meetings and the management committees. Operate the project steadily under thorough COVID-19 anti-infection measures.
2) Acquire new superior copper and gold resources <ul style="list-style-type: none"> Develop new mines for which we have operatorship 	<ul style="list-style-type: none"> We are advancing considerations regarding the acquisition of projects that aim to begin operations in the future. 	<ul style="list-style-type: none"> Identify and consider new interests. 	<ul style="list-style-type: none"> Continue ongoing appraisals aimed at acquiring new interests.
3) Improve productivity by introducing new technology <ul style="list-style-type: none"> Promote remote operation and unmanned operation of heavy machinery and information infrastructure equipment inside and outside of the Hishikari Mine 	<ul style="list-style-type: none"> We considered establishing information infrastructure both inside and outside mines as a platform for the automation and remote operation of heavy machinery. We carried out onsite trials to decide on specifications for Wi-Fi networks within mines. 	<ul style="list-style-type: none"> Establish Wi-Fi environments in the main tunnel of each mine. Install remote monitoring systems in heavy vehicles. 	<ul style="list-style-type: none"> Begin communications using Wi-Fi networks in some sections of mines. Test remote monitoring systems in heavy vehicles.
4) Advance nickel ore projects and improve productivity <ul style="list-style-type: none"> (1) Nickel production: 150 kt/year (2) Recovery rate compared to FY2018: +2% 	<ul style="list-style-type: none"> (1) Steady progress was made on the Pomalaa Project despite the possibility of delays caused by the COVID-19 pandemic in areas such as the obtainment of permissions. (2) Technological improvements for improving recovery rates at CBNC and THPAL were successful, and we achieved targets. 	<ul style="list-style-type: none"> (1) Advance procedures and discussions that enable investment decisions to be made at an early stage. (2) Continue to develop technologies to overcome the decline in ore grades. 	<ul style="list-style-type: none"> (1) Obtain required permissions and advance discussions with partners. (2) Continue to develop technology that enhances leaching rates and improves processes.

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
2. 1) Develop technology to separate, stabilize and bleed off, and create value from impurities generated by smelting processes and mines <ul style="list-style-type: none"> Develop technology to stabilize and bleed off impurities: Develop and demonstrate the process 	<ul style="list-style-type: none"> In the final year of the JOGMEC research project, we carried out research into the efficient separation and concentration of arsenic minerals. 	<ul style="list-style-type: none"> Consider the optimum conditions for separating arsenic and carry out verification tests using pilot facilities. 	<ul style="list-style-type: none"> Explore the adaptability of arsenic separation technology and investigate its compatibility with various ores.
2) Develop technology to create value from unused non-ferrous metal resources <ul style="list-style-type: none"> Contribute to existing (e.g. marine resource development) and new development projects 	<ul style="list-style-type: none"> Regarding deep sea-floor mineral resource development, we continued to participate in JOGMEC initiatives such as enhancing the functionality of equipment for excavating sea-floor massive sulfide deposits and the trial extraction of cobalt-rich crust. 	<ul style="list-style-type: none"> Enhance the functionality of excavation equipment, carry out trial extractions in the drilling business, and make various improvements in the mineral processing and smelting & refining businesses. 	<ul style="list-style-type: none"> Continue to participate in JOGMEC initiatives.
3) Recover non-ferrous metals from hard-to-process resources <ul style="list-style-type: none"> Participate in business and technology for recovery of lithium from salt-lake water in the presence of high levels of impurities 	<ul style="list-style-type: none"> We continued development of a refining process for recovering lithium from salt-lake water using an inorganic adsorbent. 	<ul style="list-style-type: none"> Verify and optimize the process through trials using pilot facilities. 	<ul style="list-style-type: none"> Carry out trials and confirm the long-term reliability of the adsorbent.
3. Demonstrate and commercialize automobile secondary battery recycling technology <ul style="list-style-type: none"> Demonstrate, commercialize, and expand scale of recycling technology that recovers cobalt from automotive lithium-ion batteries Commercialization: 2022 	<ul style="list-style-type: none"> We continued verification testing through trials using pilot facilities. 	<ul style="list-style-type: none"> Establish and verify a process with a view to commercialization. 	<ul style="list-style-type: none"> Resolve outstanding issues using pilot facilities and consider commercialization.
4. 1) Leverage our strengths to create new products and new businesses that contribute to society <ul style="list-style-type: none"> Research, develop, and commercialize new advanced materials in the fields of energy, automobiles, and information communications 	<ul style="list-style-type: none"> We proceeded with activities to create new businesses and products at both the Creation Conference and at subcommittees for each theme. 	<ul style="list-style-type: none"> Continue to search for new research themes and steadily manage research progress. 	<ul style="list-style-type: none"> Set new exploration themes and advance R&D to the next stage. Continue joint development under the Vision Co-Creation Partnership with Tohoku University.
2) Hold raw materials in-house for favorable and stable procurement <ul style="list-style-type: none"> Commercialize NiO for fuel cells following demonstration project 	<ul style="list-style-type: none"> We carried out verification testing of pilot equipment for the mass production of NiO for fuel cells. 	<ul style="list-style-type: none"> Reduce production costs and analyze and resolve barriers to increasing production. 	<ul style="list-style-type: none"> Reduce man-hours required by improving pilot facilities and confirm the effects of long-term continuous operation.
3) Expand sales of low-cost battery cathode materials through favorable, stable procurement of our own nickel raw materials <ul style="list-style-type: none"> Maintain top class global share in the expanding cathode materials market 	<ul style="list-style-type: none"> We were able to maintain a top class global share in the NCA for vehicles market, despite the impact of the COVID-19 pandemic. 	<ul style="list-style-type: none"> Respond to demand for increased production from customers and sell low-cost cathode materials for batteries. 	<ul style="list-style-type: none"> Secure nickel resources, increase production and sales of NMC for vehicles, launch low-cost cathode materials onto the market.

Initiatives

Participation in Deep Sea-Floor Mineral Resource Development Projects

Japan has limited resources, so the resources found on the ocean floor surrounding the country present huge possibilities. SMM is participating alongside a number of other companies in marine resource development projects being advanced by the Japan Oil, Gas and Metals National Corporation (JOGMEC), a Japanese government Independent Administrative Institution. We took part in projects focused on enhancing equipment for excavating sea-floor massive sulfide deposits and developing mineral processing, smelting, and refining processes for cobalt-rich crust, and we are now working toward realizing commercialization in the future.



Sea-floor massive sulfide deposits
Photo credit: JOGMEC

Recovering Lithium from Salt-lake Water

Demand for lithium is anticipated to grow due to its use in lithium-ion secondary batteries for vehicles and other applications, so we are developing technology for recovering lithium from salt-lake water.

At present, this technology is still under development, but it will enable the efficient recovery of lithium from salt-lake water containing large amounts of impurities using a unique adsorbent that can selectively recover lithium.

Compared to current lithium recovery processes, such as solar evaporation, we think this technology will be able to hugely shorten manufacturing lead times and offer superiority in terms of both technology and cost.



Salar de Atacama in Chile, which is rich in lithium

Initiatives Based on the Vision Co-Creation Partnership with Tohoku University

Since FY2020, we have continued to engage in initiatives based on a Vision Co-Creation Partnership* with Tohoku University aimed at 2050.

These initiatives follow three steps: 1) Develop research ideas, 2) carry out research and development with a view to commercialization, and 3) realize social applications.

In FY2020, we achieved success with some initiatives for developing research ideas. For example, in the melt synthesis of zinc antimonide (Zn4Sb3), one of the thermoelectric conversion materials for the realization of energy harvesting (a technology for generating electricity from the energy around us), cracks interfere with the performance of the material, but we have found how cracks form and a method for eliminating the cracks, enabling high thermoelectric conversion performance.

Both parties will continue to work on initiatives that leverage Tohoku University's strength in materials science, wide-ranging knowledge, and innovation together with SMM's strengths derived from the three-business collaboration model and metal materials research and development capabilities.

* For more information on the Vision Co-Creation Partnership, see the Company's website.

Collaborating with Shiga University to Cultivate Data Scientists

SMM and Shiga University are fully engaged in collaborative research into education related to the data analysis of manufacturing processes. This research is aimed at developing practical data analysis learning materials for students who are studying data science. In this groundbreaking endeavor, SMM will offer the university with an opportunity to engage in the experimental creation of analysis data for processes that are akin to those of an actual manufacturing site. The university will then create their own mock manufacturing process data and offer it as genuine learning materials to students. This will mean students not only receive fundamental education on statistical analysis, but also applied education aimed at practical manufacturing. Through this industry-academic collaborative initiative, we are aiming to cultivate data scientists who are well-versed in the manufacturing industry.



SMM employees together with Shiga University students

2 Climate Change

Environmental Preservation Subcommittee: For details on our subcommittee framework, etc., see p. 64–65.

Approach and Policy

As a group of companies that produces a significant amount of greenhouse gas (GHG) emissions, we are committed to contributing to mitigating climate change by reducing global GHG emissions. We will do this by reducing GHG emission volumes and intensity through operational improvements and technological innovation, as well as expanding our business through the development of products that contribute to a low-carbon society, such as battery materials and functional inks (near-infrared absorbing materials).

Operation of Environmental Management Systems

The president, in whom ultimate accountability resides, sets annual SMM Group Environmental Targets comprising policies, targets, and measures by taking into consideration environmental risks and opportunities for contribution. Acting on these targets, each business division (including each business site and contractor) establishes and operates under environmental management systems based on the ISO 14001 standard. We have acquired certification for environmental management systems at Head Office, branch offices, and all Group manufacturing sites.

Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company that actively undertakes climate change countermeasures, by reducing emissions and stably supplying products contributing to a low-carbon society, a future with zero greenhouse gases (GHGs)

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
Reduce GHG emissions			
1. Keep total GHG emissions below that of FY2013 and formulate a plan to reduce our emissions to zero in the second half of the century	<ul style="list-style-type: none"> 1. Carry out investments that reduce GHG emissions. <ul style="list-style-type: none"> • We started binary power generation at the Hishikari Mine, and solar power generation and storage at the Ome District Division and other sites. • We launched an internal carbon pricing system (ICP). 2. Advance a TCFD response. <ul style="list-style-type: none"> • We conducted climate change scenario analysis. 	<ul style="list-style-type: none"> 1. Carry out investments that reduce GHG emissions. 2. Gather and consider information on reducing GHG emissions. 3. Further develop our response to climate change risks and opportunities. 	<ul style="list-style-type: none"> 1. Carry out investments that reduce GHG emissions. <ul style="list-style-type: none"> • Verify and improve operation of the internal carbon pricing system. • Follow up on investments. 2. Gather and consider information on reducing GHG emissions. <ul style="list-style-type: none"> • Investigate technologies in areas such as hydrogen and carbon recycling. 3. Advance a TCFD response. <ul style="list-style-type: none"> • Review and refine climate change scenario analysis.
2. Cut GHG emissions intensity by at least 26% compared to FY2013	<ul style="list-style-type: none"> 1. Reduce GHG emissions intensity through operational improvements. <ul style="list-style-type: none"> • GHG emissions intensity for FY2020 was about 4% lower than FY2013 levels. 2. Advance the use of low-carbon energy. <ul style="list-style-type: none"> • We considered using low-carbon energy. 	<ul style="list-style-type: none"> 1. Continue to reduce GHG emissions intensity through further operational improvements. 2. Shift to low-carbon energy. 	<ul style="list-style-type: none"> 1. Reduce GHG emissions intensity through operational improvements. <ul style="list-style-type: none"> • Strengthen management of operations and check the effects. 2. Advance the use of low-carbon energy. <ul style="list-style-type: none"> • Consider introducing low-carbon energy.
3. Expand contribution of GHG reduction by products contributing to a low-carbon society: 600 kt-CO ₂ or more	<ul style="list-style-type: none"> 1. Look into and evaluate methods of calculating contribution to reducing GHG emissions. <ul style="list-style-type: none"> • We formulated a process for calculating reduction contributions from battery materials, etc. 2. Increase production of products contributing to a low-carbon society and develop new products. <ul style="list-style-type: none"> • We continued to enhance production capacity of products contributing to a low-carbon society (battery materials, functional inks, etc.). • We continued joint development, including of new materials. <p>* Initiatives based on the Vision Co-Creation Partnership with Tohoku University (see p. 70) among others.</p>	<ul style="list-style-type: none"> 1. Define "products contributing to a low-carbon society." 2. Look into and evaluate methods of calculating contribution to reducing GHG emissions. 3. Increase production of products contributing to a low-carbon society and develop new products. 	<ul style="list-style-type: none"> 1. Consider a certification system and standards for products contributing to a low-carbon society. 2. Look into and evaluate methods of calculating contribution to reducing GHG emissions. 3. Increase production of products contributing to a low-carbon society and develop new products.

TCFD Initiatives

In February 2020, we became a supporter of the Task Force on Climate-related Financial Disclosures (TCFD). Then in March 2020, we formulated and released our Vision for 2030 which positioned climate change as a material issue. Our vision regarding

climate change is to become “a company that actively undertakes climate change countermeasures, by reducing emissions and stably supplying products contributing to a low-carbon society, a future with zero greenhouse gases.” We have made a

commitment to strengthening efforts to achieve this vision and to enhance disclosure of relevant information.

The Group's climate change response is considered by the CSR Committee (chaired by the president) and the Environmental Preservation Subcommittee (chaired by the General Manager of the Safety & Environment Control Department and comprising members from business and corporate divisions) under it. These considerations are reported to and discussed by the Board of Directors and then specific measures are developed at each division.

The TCFD recommendations advise that the disclosure of climate change-related risks and opportunities should be organized according to four core elements of corporate management and operations (governance, strategy, risk management, and metrics & targets). Efforts at SMM are being led by

members of the Environmental Preservation Subcommittee's Climate Change Taskforce, who have solicited insight from experts in the field and incorporated it into climate change scenario analysis.

Analysis involved 1) identifying key drivers, 2) establishing scenarios for temperature rises of 1.5°C and 4°C, 3) considering impact on business, 4) identifying and evaluating risks and opportunities, and then 5) considering ways to approach these (such as Vision for 2030).

We have shared information gained from the results of this analysis within the Group through means such as briefing sessions for the CSR Committee and relevant officers.

Going forward, we will actively disclose information about climate change-related risks and opportunities.

See the TCFD Content Index on p. 2 of the supplementary ESG Data Book 2021

Climate Change Scenario Analysis Results

We considered two scenarios for 2050

- 1.5°C scenario** A scenario in which ongoing efforts are made to keep the rise in average temperatures to within 1.5°C. Information sources included the IEA's¹ WEO² 2019 Sustainable Development Scenario³ and ETP⁴ Beyond 2D Scenario, and the IPCC's⁵ special report Global Warming of 1.5°C.
- 4°C scenario** A scenario in which no countermeasures are taken, and temperatures are allowed to continue rising. Information sources included the IEA's WEO 2018 New Policies Scenario and the IPCC's RCP⁶ 8.5 Scenario.

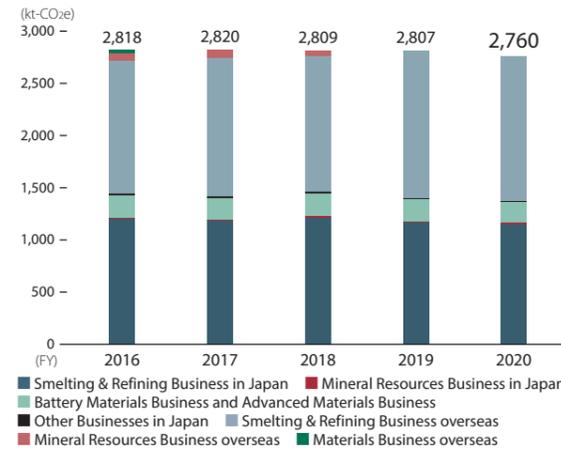
1. IEA: International Energy Agency. A global body focused on energy.
 2. WEO: World Energy Outlook. A report issued by the IEA covering topics such as energy demand and the outlook concerning technological development.
 3. Sustainable Development Scenario: A scenario that analyzes pathways for fully achieving the targets of the Paris Agreement.
 4. ETP: Energy Technology Perspectives. A report issued by the IEA.
 5. IPCC: Intergovernmental Panel on Climate Change.
 6. RCP: Representative Concentration Pathway.

Scenario	Category	Drivers	Anticipated situation (2050)	Impact on business	Risk and opportunity (medium- to long-term)	SMM Group approach: Initiatives for realizing Vision 2030
1.5°C	Climate change policy	Carbon pricing (carbon taxes, emissions trading, etc.)	Overall monetary amounts have risen (depending on nation or region)	Increased tax burden, etc.	Risk Large	Climate Change: Reduce GHG emissions See p.71-74
				Increases in R&D costs and investment in low-carbon facilities and equipment	Risk Short- to long-term, large	Climate Change: Reduce GHG emissions See p.71-74 Effective Use of Non-Ferrous Metal Resources: Improve productivity by introducing new technology, Advance nickel ore projects and improve productivity See p.68-70
	Climate change policy	Tightening of vehicle regulations, policy to promote LEVs ⁷	Fuel consumption regulations have been tightened and restrictions on movement introduced Policy is supportive of EVs and LEVs Internal combustion-based vehicles have been replaced by LEVs	Increase in sales due to growing demand for batteries and nickel accompanying the spread of EVs	Opportunity Large	Climate Change: Reduce GHG emissions See p.71-74 Effective Use of Non-Ferrous Metal Resources: Advance nickel ore projects and improve productivity, Develop technology to create value from unused non-ferrous metal resources, Leverage our strengths to create new products and new businesses that contribute to society, Hold raw materials in-house for favorable and stable procurement, Expand sales of low-cost battery cathode materials through favorable, stable procurement of our own nickel raw materials See p.68-70
				Increase in sales of nickel oxide powder and lithium batteries accompanying the development of a hydrogen society and the spread of FCVs Increase in sales of other products contributing to a low-carbon society		
	Society and infrastructure	Progress of digital transformation related to vehicles, changes in values	Self-driving vehicles, MaaS ⁸ , and car-sharing are common Fewer households own cars			
	Technology	Development of hydrogen technology, fuel cells	Fuel cell vehicles (FCV) are common EVs and plug-in hybrid EVs (PHEV) are common			
Climate change policy	Shift to electrical energy	Electricity occupies a higher proportion of final energy consumption	Increase in demand for copper accompanying the strengthening of electrical grids (although there is competition from aluminum, etc.)	Opportunity Large	Effective Use of Non-Ferrous Metal Resources: Advance copper mine projects, Acquire new superior copper and gold resources See p.68-70	
Technology	Technological shift in automobile storage batteries	There has been a shift in the market share of automobile storage batteries	Rise in the proportion of nickel used in batteries and increased sales of nickel accompanying efforts to move away from cobalt Solid state batteries that leverage SMM technology as next-generation batteries	Opportunity Medium	Climate Change: Reduce GHG emissions See p.71-74 Effective Use of Non-Ferrous Metal Resources: Advance nickel ore projects and improve productivity, Develop technology to create value from unused non-ferrous metal resources, Leverage our strengths to create new products and new businesses that contribute to society, Hold raw materials in-house for favorable and stable procurement, Expand sales of low-cost battery cathode materials through favorable, stable procurement of our own nickel raw materials See p.68-70	
			Spread of iron and manganese-based batteries accompanying efforts to move away from cobalt Spread of new batteries that do not leverage SMM technology as next-generation batteries	Risk Medium		
			Limits on raw materials sourcing, increase in materials and manufacturing costs, greater advantages due to owning our own mines Expansion of the automobile secondary battery recycling business Impact of ESG investment on financing Reputational risk if SMM's efforts are evaluated as insufficient	Opportunity Medium Risk Medium to large		
Society and infrastructure	Interest in matters such as responsible sourcing, environmental footprint, and the social impact of businesses	There is greater awareness regarding sustainability ESG investment is mainstream There are more possible applications for alternative materials and recycled metals			Effective Use of Non-Ferrous Metal Resources: Advance copper mine projects, Acquire new superior copper and gold resources, Advance nickel ore projects and improve productivity, Hold raw materials in-house for favorable and stable procurement, Demonstrate and commercialize automobile secondary battery recycling technology See p.68-70 Human Rights in the Supply Chain: Promote responsible sourcing, particularly responsible mineral sourcing See p.92-93 Rights of Indigenous Peoples: Understand indigenous peoples and their traditions and culture, Support initiatives that lead to respect for the traditions and cultures of indigenous peoples See p.91	
4°C	Temperatures and rainfall	Rises in average temperature, sea surface temperature, and sea levels Sea levels have risen Storm surges are more frequent	Decline in port functionality, greater risk of storm surges, possibility of facility-based countermeasures needing to be taken at some coastal business sites		Risk Large	Significant Environmental Accidents and Biodiversity: Zero significant environmental accidents See p.75-79
				Increase in risk of flooding or water shortages at business sites in certain regions, possibility of facility-based countermeasures needing to be taken	Risk Large	Significant Environmental Accidents and Biodiversity: Zero significant environmental accidents See p.75-79
				Decline in operations at key suppliers, decline in plant operations due to interruptions to procurement and shipping routes	Risk Large	Significant Environmental Accidents and Biodiversity: Zero significant environmental accidents, Reduce emissions of hazardous substances See p.75-79
				Possibility of facility-based countermeasures needing to be taken due to the increased risk of damage to tailing dams	Risk Large	Significant Environmental Accidents: Zero significant environmental accidents See p.75-79

7 An abbreviation for LEVs: Low-Emission Vehicles
 8 An abbreviation for MaaS: Mobility as a Service

Initiatives and Sustainability Data

GHG Emissions (Scope 1 + 2)



In FY2020, we reduced total Group GHG emissions (Scope 1 + 2) to 2,760 kt-CO₂e due to factors including a decrease in production volumes and initiatives such as energy-saving activities. GHG emissions related transport operations in Japan (Scope 3) came to 25 kt-CO₂e.

The SMM Group will continue to promote energy-saving activities in FY2021 as well, and anticipates reductions of 16 kt-CO₂e for the year.

GHG emissions reduced due to solar power generated at the solar power plant operated by the Group in Kashima, Ibaraki Prefecture came to approximately 1.6 kt-CO₂e in FY2020.

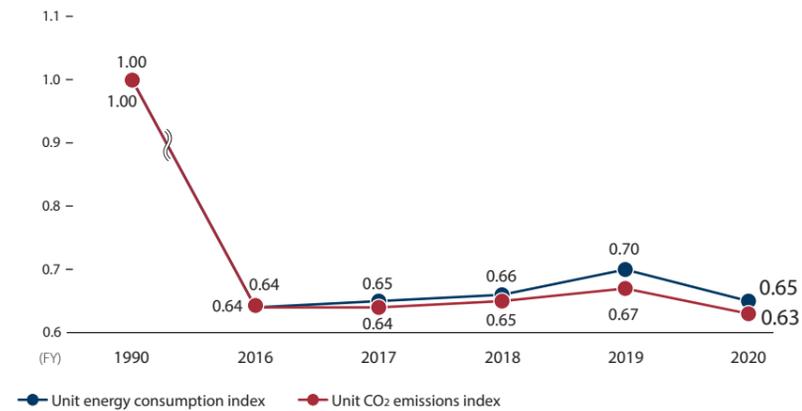
	Group companies in Japan	Group companies overseas	Total
Scope 1	492	1,385	1,877
Scope 2	881	2	882
Total	1,373	1,387	2,760

Scope 3: See Scope 3 (emissions during domestic transport) in the Output table on p.79

Direct emissions for both Japan and overseas are calculated using emission factors conforming to the Japanese Act on Promotion of Global Warming Countermeasures. This includes non-energy-derived GHG emissions (385 kt-CO₂e) that are outside the scope of the law. The amount of GHG emissions from electric power purchased in Japan is calculated according to the market-based method using the emission factors of electric suppliers. For overseas emission factors, we used the latest emission factors for each country as published by the IEA.

Unit Energy and CO₂ Emissions Index¹

(Scope: Smelting & Refining Business in Japan)



In the Group's Smelting & Refining Business in Japan, unit energy consumption for FY2020 improved, decreasing by 5 points. This was due to a recovery in FY2020 from the situation in FY2019, when regular maintenance and equipment trouble at the Toyo Smelter & Refinery caused a decline in production of electrolytic copper.

SMM is a member of the Japan Mining Industry Association (JMIA), an organization of non-ferrous mining, smelting and refining companies, and we are participating in action by JMIA to implement the Carbon Neutrality Action Plan (formerly called The Commitment to a Low Carbon Society) being led by the Japan Business Federation (Keidanren) within the non-ferrous mining, smelting and refining industry.

We will continue to proactively engage in thorough energy management, the promotion of energy-saving activities, the introduction of renewable energy, the use of unutilized heat, and other endeavors with the aim of reducing unit energy by an average of at least 1% per year and further lowering CO₂ emissions over the medium to long term.

1. Unit energy and CO₂ emissions index: The amount of energy consumed and CO₂ emitted during the production of 1 ton of product, assuming the FY1990 value to be 1 (including fuels used as reducing agents).

3 Significant Environmental Accidents

4 Biodiversity

Environmental Preservation Subcommittee: For details on our subcommittee framework, etc., see p. 64–65.

Approach and Policy

Significant environmental accidents have major impacts on the environment and communities, and can result in loss of the trust that is a prerequisite for business continuity. By improving our facilities and management to address intensifying natural disasters, we are working to prevent serious environmental accidents and mitigate impacts in the event of occurrence.

We are also working to rationalize our use of water resources and to reduce our emissions of harmful substances into the atmosphere and water, and are developing environmental conservation activities that place importance on biodiversity.

Operation of Environmental Management Systems (See p.71)

Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company that values water resources and biodiversity, and protects the richness of the sea and land

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
1. Zero significant environmental accidents 1) Promote improvements through the use of risk management and environmental management systems	1. Zero significant environmental accidents in FY2020. 2. Implemented facility improvements, etc. - Carried out initiatives based on risk management system (RMS) and environmental management system (EMS) plans. - Completed major construction and began operation of new mine wastewater treatment facility at Yaso Akakura (Fukushima Prefecture).	1. Continue facility improvements.	1. Continue facility improvements, etc. - Continue management through RMS, EMS. - Implement measures in line with FY2021 budget.
2) Reinforce and improve equipment and infrastructure to address increases in sources of natural hazard	1. Assessed risk through climate change scenario analysis; examined necessary adaptations. 2. Examined initiatives for Global Industry Standard on Tailings Management (GISTM). 3. Strengthened and improved equipment and infrastructure in response to increasing sources of natural risk. - Formulated accumulation site management standards for closed/suspended mines.	1. GISTM compliance. 2. Continue strengthening and improving equipment and infrastructure in response to increasing sources of natural risk.	1. Promote GISTM compliance. 2. Strengthen and improve equipment and infrastructure in response to increasing sources of natural risk. - Strengthen management to ensure stability of accumulation sites, etc.
2. Reduce emissions of hazardous substances (year on year) 1) Optimize water use; reduce emissions of hazardous substances to the atmosphere and water	1. Examined SMM Group policy regarding optimization of water resources. - Performed benchmark survey. 2. Reduced hazardous substance emissions into the atmosphere and water. - Enforced management at business sites.	1. Examine policies regarding optimization of water use. 2. Further reduce hazardous substance emissions into the atmosphere and water.	1. Formulate SMM Group policy on optimization of water use. 2. Continue efforts to reduce hazardous substance emissions into the atmosphere and water at business sites.
2) Promote various environmental preservation and biodiversity preservation activities, such as regular reforestation	1. Continued regular reforestation. - Conducted regular reforestation at CBNC and THPAL. 2. Encouraged active use of recycled raw materials and reuse of slag. - Strengthened settling to counter muddy water entering rivers during heavy rains in rainy season in the Philippines.	1. Continue regular reforestation. 2. Further promote effective use of secondary materials, waste, and other resources.	1. Continue regular reforestation. - Continue greening of CBNC and THPAL. 2. Promote effective use of resources. - Promote processing of scrap and other secondary materials. - Promote reuse of slag and sludge. Communication with mining companies through CBNC and THPAL.

Significant Environmental Accidents: Initiatives

The Appropriate Management of Tailings Dams (Slag Accumulation Sites)

Accumulation sites in which tailings from mines are dumped can collapse and cause considerable damage.

In August 2020, Global Tailings Review (GTR) formulated the Global Industry Standard on Tailings Management (GISTM). The International Council on Mining and Metals (ICMM; see supplementary ESG Data Book 2021, p. 22) is committed to compliance with GISTM. As a member of ICMM, we are conducting examinations to comply with the standard.

At closed mines managed by our Group, we treat wastewater containing heavy metals discharged from drifts and manage tailing dams that collect slag discharged by mineral ore processing facilities. We have enacted safety measures at 42 tailing dam locations we manage in Japan. In regard to stabilization work, we responded to revisions to management

criteria for accumulation sites made in light of the Great East Japan Earthquake in 2011, and in the period up to 2020, invested a total of approximately ¥4.5 billion.

As treating wastewater requires removing heavy metals until water quality meets wastewater quality standards, it is a key part of the management of closed mines, so a portion of treatment costs are subsidized by the Japanese government. In recent years, there has been increasing attention on passive treatment¹ technologies that use microbes to remove heavy metals.

We will continue performing management to ensure stability as we strengthen and improve our equipment and infrastructure.

There were no significant leakage accidents in FY2020.

1. Passive treatment is a natural method of purifying wastewater that does not require the use of force or chemicals. It is expected to find use as a lower cost, more environmentally friendly process than wastewater treatment using chemicals.

Biodiversity: Initiatives and Sustainability Data

Effective Use of Water Resources (Water Stewardship)

Our Group's manufacturing processes require large amounts of water, particularly in the Smelting & Refining Business. At the same time, water is a shared resource of local regions and is closely connected to the lives of local residents and communities, as well as to the surrounding ecosystem.

We must consider local communities and the environment in areas where we use water, and make responsible use of water. We can also make contributions to the community in connection with water. As such, we are undertaking a number of initiatives related to water.

- Prevention of excessive withdrawal of water by understanding the amounts of withdrawal by source
- Reduction of water withdrawal and effluent amounts by promoting the use of recycled and reused water
- Promotion of effective use of water by understanding water balance and optimizing our amounts used
- Reduction of environmental impact by reducing amounts of hazardous chemical substances in effluent discharged into water
- Promotion of preservation of biodiversity through aquatic life monitoring surveys near our business sites
- Promotion of infrastructure development in areas where access to water is difficult

Every year, we respond to the CDP's water security questionnaire regarding our Group's water management.

Enforcement of Chemical Management

When a business site intends to handle a new chemical, it conducts a preliminary study that covers hazard statements and other applicable information, and deliberates on safety in a meeting at the business site before deciding whether to adopt the handling of said chemical. In addition, to enable appropriate and safe use of chemicals throughout the supply chain, we also provide customers with information on SMM Group products using safety data sheets (SDS), regardless of whether or not we are legally obligated to do so.

Enforcement of Environment-Related Compliance

In addition to providing education on environmental laws, each year we hold seminars on laws and regulations for personnel in charge of the environment at business sites. We also gather information in a range of areas such as legal amendments, including the REACH Regulation² and other overseas regulations.

2. REACH Regulation: The Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. An EU regulation concerning the registration, evaluation, approval, and limiting of chemical substances.

Consideration of Biodiversity

We are working to reduce the environmental impact of our development efforts, operations, and product use in order to minimize any undesirable direct or indirect impacts on biodiversity.

We are systematically curbing our discharges of chemicals and other substances, and continue to further cut our emissions of hazardous chemical substances.

To preserve the ecosystems as well as the foundation of life for communities in the area around the Hishikari Mine, SMM conducts annual environmental monitoring surveys in the area, analyzing 18 items including water quality, rice paddy soil, unpolished rice, straw, and other natural elements every year. Every other year, we catch fish to check for abnormal levels of heavy metals.

In the Philippines, Coral Bay Nickel Corporation (CBNC) and Taganito HPAL Nickel Corporation (THPAL) undertake greening activities. CBNC holds a yearly *Shokuju* (Tree Planting) Day event in which employees and local residents plant seedlings.



Scene from *Shokuju* (Tree Planting) Day

Reducing the Environmental Impact of Constructing New Plants

CBNC and THPAL in the Philippines produce electrolytic nickel and nickel sulfate intermediates. To construct a refinery in the Philippines, we first had to obtain an Environmental Compli-

ance Certificate (ECC) from the Department of Environment and Natural Resources (DENR). This required submitting an Environmental Impact Assessment (EIA).

When constructing the refinery, we sought adequate dialogue with the Philippine government, local authorities and local citizens right from the planning stage. Efforts were made to construct a plant that would have a minimal impact on the environment. For example, a pier used to deliver sulfuric acid and methanol to the plant was made to circle around the coral reef, and wastewater outlets were also positioned to ensure the reef's protection.

CBNC began operations of the refinery in April 2005 based on a design certified by the DENR, and was followed by THPAL in October 2013. The refineries have set up Environmental Management Offices (EMO) as bodies to promote environmental initiatives in operations. Besides environmental surveys by the EMO, the environment is monitored by a team of representatives from organizations such as the DENR, local authorities and NGOs which carry out regular sampling of the air, water, flora and fauna. With this sort of environmental monitoring, we check that the construction and operation of plants do not have serious impacts on the ecosystem, while keeping environmental impacts from wastewater and other factors to a minimum.



Rooted coral planted since 2005

Amount of Land Developed or Rehabilitated (FY2020)

	A: Total area of land not rehabilitated (as of the end of FY2019)	B: Area of land newly developed in FY2020	C: Area of land newly rehabilitated in FY2020	D: Total area of land developed but not rehabilitated (A+B-C)
Hishikari Mine	22	0	0	22
Coral Bay Nickel Corporation	274	6	0	280
Taganito HPAL Nickel Corporation	567 ¹	0	-2 ²	568

1. The area of the developed land was reviewed on the basis of the survey results.

2. THPAL conducted rehabilitation of 12 hectares in the developed land in fiscal 2020. However, as the survey shows a decrease in existing rehabilitated area due to withering and other factors, the area of newly rehabilitated land is adjusted. THPAL is also advancing rehabilitation activities in nearby regions outside the site. In cooperation with the Philippine government, rehabilitation of 74 hectares was achieved in FY2020 in nearby regions outside the site. To date, 455 hectares in total have been certified as rehabilitated area.

Material Flows within Business Activity (FY2020)

INPUT (Resources & Energy)

Raw Materials		Recycled Materials ¹		Materials	
Gold and silver ore	191 kt	Copper scrap	135 kt	Silica sand (for copper smelting)	122 kt
Copper concentrates	1,441 kt	Secondary zinc	19 kt	Chemicals (lime-based)	1,202 kt
Nickel oxide ore	8,581 kt	Secondary precious metals	4 kt	Chemicals (sodium-based)	106 kt
Nickel matte, etc.	39 kt	Electric arc furnace dust	71 kt	Chemicals (magnesium-based)	14 kt
Raw material for batteries	75 kt	ALC waste	73 t	Sulfuric acid	460 kt
ALC raw material, incl. silica rock	159 kt			Cement, etc.	103 kt
Hydrotreating catalyst raw material	39 kt				

Percentage of recycled input raw materials used
2.13%

Energy ²	Consumption	Energy Value
Non-renewable sources		
Heavy oil	44,991 kL	1,843 TJ
Coal/coke	535,636 t	13,817 TJ
Diesel/gasoline/kerosene	18,145 kL	680 TJ
LPG/LNG	8,812 t	448 TJ
City gas	8,775 ML	395 TJ
Purchased electricity	1,486,802 MWh	14,465 TJ
Purchased steam	65,802 GJ	67 TJ
Sub-total		31,716 TJ
Renewable sources		
Solar power generation, binary power generation	306 MWh	0.03 TJ
Wood pellets	621 t	12 TJ
Total energy consumption		31,728 TJ

Water ³	
Total volume of fresh water withdrawn	35,173 ML
Surface water (rivers)	13,717 ML
Rainwater	68 ML
Groundwater	6,657 ML
Industrial water (water from another organization)	14,339 ML
Tap water (water from another organization)	393 ML
Volume of seawater withdrawn	165,132 ML
Total volume of water consumed from all areas ⁴	4,281 ML

1. Does not include materials recycled within plants.
 2. Calorific values for both Japan and overseas are calculated using coefficients conforming to the Japanese Act on the Rational Use, etc. of Energy for fuel, heat, electricity, etc. that were consumed in business activities both in Japan and overseas. Fuels used as reducing agents are also included. Energy value indicates the energy input in the case of purchased electricity and purchased steam, and calorific value for all others.
 3. SMM uses the WWF/DEG Water Risk Filter to determine regions with high water stress. As a result of this, there are no areas of high water stress at SMM Group's production sites.
 4. The total water consumption is estimated by subtracting the total amount of water discharged from the total amount of water withdrawn.

OUTPUT (Products & Emissions)

Products		Emissions into the Atmosphere		Emissions into Water	
Electrolytic copper	443 kt	CO ₂	2,785 kt	Total wastewater	199,057 ML
Gold	17 t	Scope 1 (direct emissions) ¹	1,877 kt (Decrease of 65 kt compared to the previous fiscal year)	Discharges into seas ⁴	198,051 ML
Silver	203 t	Scope 2 (indirect emissions) ²	882 kt (Increase of 17 kt compared to the previous fiscal year)	Discharges into rivers	965 ML
Electrolytic nickel	56 kt	Scope 3 (emissions during domestic transport) ³	25 kt (The same year on year)	Sewerage, etc.	42 ML
Nickel sulfate	11 kt	SO _x	1,733 t	COD (chemical oxygen demand)	49 t
Electrolytic cobalt	4 kt	NO _x	1,444 t	BOD (biochemical oxygen demand)	15 t
Crude zinc oxide	33 kt	Soot and dust	80 t	Total phosphorus	1 t
Ferronickel	70 kt	PRTR substances	9 t	Total nitrogen	69 t
Battery materials	49 kt			PRTR substances (discharged into public water areas)	74 t
Sulfuric acid	341 kt			PRTR substances (discharged into the soil or in landfills within business premises)	3 t
Slag	1,458 kt				
Hydrotreating catalysts	7 kt				
ALC (Siporex)	327 ML				

Percentage of products from recycled input
4.87%

Waste (including Items of Value)	
Total waste	6,857 kt
Breakdown of total waste	
Spoil	3 kt
Wastewater sludge from CBNC, THPAL, etc.	6,777 kt
Industrial waste (Japan)	76 kt
Other	1 kt
Landfill on company premises	6,780 kt
PRTR substances ⁵	1,822 t

- Direct emissions for both Japan and overseas are calculated using emission factors conforming to the Japanese Act on Promotion of Global Warming Countermeasures. This includes non-energy-derived GHG emissions (385 kt-CO₂e) that are outside the scope of the law. GHGs from wood pellets are not included.
- The amount of GHG emissions from electric power purchased in Japan is calculated according to the market-based method using the emission factors of electric suppliers. For overseas emission factors, we used the latest emission factors for each country as published by the IEA. The amount of indirect emissions was 744 kt-CO₂e when calculated for both Japan and overseas with the location-based method using IEA country-specific emission factors.
- Emissions during transportation in Japan are calculated in line with the Act on the Rational Use, etc. of Energy and the Act on Promotion of Global Warming Countermeasures.
- Discharges into rivers flowing into enclosed seas are included as "discharges into seas."
- Total transfers to sewerage and off-site transfers.

Business and Human Rights

The responsibilities that companies must fulfill with regard to business and human rights are increasing in importance. Our Group has constructed a management system that addresses employees, local communities, indigenous peoples, and supply chains, in accordance with international standards and our Group's policies.

Employees

In accordance with the SMM Group Policy on Human Rights, we began operating our human rights management program¹ in FY2014. At business sites where issues are identified, we conduct on-site surveys as needed. In FY2020, there were no reports of cases of child labor or forced labor, serious infringements on freedom of association, or plant closures due to causes such as strikes.

1. A Group-wide program that incorporates a human rights due diligence framework based on the UN's Guiding Principles on Business and Human Rights. We aim to build a structured system to prevent and avoid complicity in either direct or indirect violations of human rights, and to make possible more appropriate responses, including relief, to concerns that arise.

Number of requests for consultations received from employees (FY2020)

Item	Number
Concerning harassment	12
Concerning personnel affairs/work/wages	4
Total ²	16

We responded appropriately to all requests for consultations.
2. Includes those directed to SMM Group direct hotlines

Local Communities and Indigenous Peoples

There are occasions when we inevitably have to ask local citizens to relocate to make way for development of a mine or the construction of associated facilities. On such occasions, we seek the understanding of local citizens and offer alternative land. For the Hishikari Mine, from 1983 to 1989 three households in total were asked to relocate. For Taganito HPA Nickel Corporation, we asked 41 households in areas to be affected by the plant's construction to relocate.³ In FY2020, there were no matters for concern, such as complaints from indigenous peoples, reported regarding any of the mines or smelters and refineries in which SMM has more than a 50% interest.

We also plan a program for human rights due diligence aimed at local communities, to be implemented at overseas business sites.

3. A relocation plan was formulated in line with the World Bank's Operational Policy on Involuntary Resettlement. With the agreement of all citizens, the relocation was completed by December 2010. Furthermore, we have continued to provide support since the relocation, including for home repair and maintenance, and programs to help restore livelihoods that encourage getting skills and know-how so the citizens can get income for the rest of their lives.

Supply Chain

We undertake due diligence based on international standards and in accordance with the SMM Group Responsible Sourcing Policy and the SMM Group Responsible Mineral Sourcing Policy. (See p. 92–93)

In FY2020, there were no suppliers identified as having current or potential problems or issues. As of July 2020, there were no cases of artisanal and small-scale mining (ASM) with work environment issues in regions where SMM operates, nor did SMM have any programs for involvement in ASM.

5 Employees' Occupational Health and Safety

Occupational Health & Safety Subcommittee: For details on our subcommittee framework, etc., see p. 64–65.

Approach and Policy

The SMM Group aims to create comfortable and safe workplaces, including at our contractors. An environment in which employees can carry out their work in safety and with peace of mind is an important element of management, leading to higher employee motivation and greater relationships of trust between employees and the Company. To address such issues, we are further advancing our ongoing equipment safety measures and have begun introducing advanced technologies such as the IoT¹ and artificial intelligence (AI).

1. IoT: The Internet of things, under which services are deployed through all manner of things being connected through the Internet.

Occupational Health and Safety Management System

We are building a line management framework in which the president is the person ultimately responsible for occupational health and safety and the person in charge of each business site is appointed health and safety manager of that site, operating under the guidance and supervision of the general managers of the relevant divisions. Constructive discussions on ways to improve health and safety in the workplace also take place during meetings of the Occupational Health and Safety Committee comprising representatives from both labor and management. Furthermore, the executive officer responsible for the Safety & Environment Control Department tackles occupational health and safety by providing guidance and advice to each department and each of the Group's business sites, as well as coordinating efficiently with the health and safety officer assigned to each division and business site in order to improve health and safety under the concepts of the OSHMS.² We have business sites that have received OSHMS certification through the Japan Industrial Safety and Health Association (JISHA) accreditation method, as well as business sites that have received or are preparing to receive ISO 45001 certification. At overseas business sites, we are building an occupational health and safety management framework based on local laws and regulations and are implementing initiatives including activities to ensure that hazard prediction, risk assessment, and the improvement of equipment are at the same level as in Japan.

2. OSHMS is an abbreviation of Occupational Safety and Health Management System and it is a management system that aims to improve occupational health and safety levels at business sites through the implementation of a set of processes known as the PDCA cycle (Plan, Do, Check, Act), based on cooperation between businesses and their workers.

Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company where all employees work together with safety first the priority in a comfortable working environment as well as safe facilities and operations

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
1. Prevent occupational accidents Serious accidents: zero (in Japan and overseas, including contractors). All accidents: reduce year on year, with aim of eventually zero.	<ul style="list-style-type: none"> Zero serious accidents. Number of accidents (CY2020) Numbers in parentheses are CY2019 results Employees: Japan 15 (14); overseas 0 (1) Contractors: Japan 8 (11); overseas 3 (6) Examined conversion to smart plants (mines). Implemented patrols using the web, etc. Acquired ISO 45001 certification at Niihama Nickel Refinery. Created manuals and implemented education for safety personnel. Introduced virtual reality (VR) hazard simulation equipment. 	<ol style="list-style-type: none"> Continue to enhance equipment safety. Construct a management system with effective checks and actions. Continue development of human resources who place safety first in work. 	<ol style="list-style-type: none"> Enhance equipment safety <ul style="list-style-type: none"> Formulate and execute investment plans for equipment safety enhancement. Undertake DX initiatives to ensure safety at manufacturing bases. Construct a management system with effective checks and actions <ul style="list-style-type: none"> Conduct appropriate risk assessments. Promote ISO 45001 certification acquisition. Continue development of human resources who place safety first in work <ul style="list-style-type: none"> Make effective use of work observation manual. Promote understanding of safety rules through implementation of hazard simulation training.
2. Prevent occurrence of occupational diseases Number of workplaces that present higher health risks: reduce year on year Occurrence of occupational diseases: zero	<ul style="list-style-type: none"> There was some increase in the number of workplaces classified as Control Class 3 / Control Class 2 due to equipment deterioration, etc., but we continued to improve workplace environment. Zero occupational diseases. 	<ol style="list-style-type: none"> Promote investments for improving workplace environments, and strengthening of management of maintenance. Checks and guidance during patrols, and follow-up on results of work environment measurement. 	<ol style="list-style-type: none"> Promote investments for improving workplace environments, strengthen management of maintenance <ul style="list-style-type: none"> Improve and manage maintenance of atmospheric hazardous substance concentration in workplaces. Standardize trend management and strengthen preventive measures. Checks and guidance during patrols, and follow-up on results of work environment measurement.

Initiatives and Sustainability Data

Group-Wide Activities

While we faced restrictions in 2020 due to the COVID-19 pandemic, we implemented the following measures to ensure safety.

Japan	(1) Formulated and began using the SMM work observation manual to prevent serious accidents, based on discussions in health and safety manager meetings on improving the effectiveness of work observation • Made work improvements and enhanced hazard awareness by clarifying points for discerning on-site risks	Overseas	(1) Improved initiatives at business sites to provide instruction and safety education through remote patrols by individual divisions and the like (2) Continued initiatives such as 10-second employee hazard prediction and activities to reduce risk through work observations and the like
	(2) Conducted group discussions on serious accident patterns at business sites, confirmation of on-site work, and work observation following improvements (3) Improved efforts at business sites with instruction and support through patrols (including remote patrols) by individual divisions, the Besshi-Niihama District Division, and the Safety & Environment Control Department (4) Continued hazard simulation training focused on compliance with safety rules at business sites		Occupational Health Activities

Work-Related Incidents (2020)

("Employees" includes employees and part-time workers from Group companies)

	Japan				Overseas			
	Employees		Non-employee workers		Employees		Non-employee workers	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Number of work-related fatalities and frequency rate (Calculated per 1,000,000 hours, same applies below)	0	0	0	0	0	0	0	0
Number of work-related injuries resulting in disability and frequency rate	0	0	0	0	0	0	0	0
Number of recordable work-related injuries and frequency rate ¹	15	1.13	8	4.07	0	0	3	0.28

1. "Recordable work-related injuries" is the total of injuries that required hospital treatment and resulted in absence from work and injuries not resulting in absence from work.

Work-Related Ill Health (2020)

("Employees" includes employees and part-time workers from Group companies)

	Japan		Overseas	
	Employees	Non-employee workers	Employees	Non-employee workers
Number of fatalities as a result of work-related ill health	0	0	0	0
Number of cases of recordable work-related ill health ²	0	— ³	0	0

2. Regarding employees in Japan, we also record the number of workers who receive abnormal findings but do not require treatment (as this is personal information, it is not disclosed).

3. Under Japanese laws and regulations, for workers other than employees, this falls under the responsibility and management of the businesses that hire them, so while we provide leadership, we are unable to disclose information.

Initiatives and Internal Awards at Coral Bay Nickel Corporation (Philippines)

At Coral Bay Nickel Corporation (CBNC), the SMM Group's first HPAL plant, occupational accidents of minimal (not requiring absence from work) or greater severity had occurred nearly every year until 2016. In response, CBNC undertook hazard prediction education and in-house development of best practices, and effectively executed wide-ranging safety activities including safety patrols and guidance by night managers and other persons in charge. The result was the achievement of 4 million continuous, fully accident-free person-hours since 2017. In March 2021, CBNC received the President's award for security, safety, and occupational health management, a first for an overseas business site of our Group.



Hazard prediction board at CBNC



Scene from toolbox meeting (CBNC)

Topic in 2021

In June 2021, a fatal accident involving contact with a forklift occurred at the workplace of a Group company in Japan. In order to prevent the recurrence of such accidents, we will comply with workplace rules that return to the basics, enforce the implementation of basic actions, further enhance safety of equipment and deter unsafe behavior, and promote the creation of safe workplaces.

6 Diverse Human Resources

7 Development and Participation of Human Resources

Human Resources Development Subcommittee: For details on our subcommittee framework, etc., see p. 64–65

Approach and Policy

Based on the Group Corporate Philosophy of "respect for all individuals" and in accordance with the SMM Group Policy on Human Rights, we work to secure, develop, and make the most of human resources by respecting the diverse values of each individual employee and fostering workplace environments in which each individual can fully demonstrate their abilities.

Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company where all employees can take a vibrant and active part

1. A company that respects the humanity of each and every employee, and where employees feel pride, motivation, and joy in work
2. A company that provides each and every employee with opportunities to improve his/her capabilities, and grows together with employees

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
1. Promote working style reform and create workplaces that make use of digital technology, enabling diverse human resources to play vibrant and active roles 1) Improve scores for "Management by managers and superiors," "Appeal of job," and "Work environment" in employee awareness survey	<ul style="list-style-type: none"> As employee awareness surveys are carried out once every three years, we used similar and connected items from stress checks. A comparison of the checks carried out in FY2019 and FY2020 showed improvement in the proportion of employees with issues for each item. 	<ul style="list-style-type: none"> Support employees' activities by revising various human resources systems. Improve productivity in the Head Office District. 	<ul style="list-style-type: none"> Continue to carry out events in FY2021 that influence "Appeal of job," and "Work environment" in particular, such as announcing proposed revisions to human resources systems and renovating the Head Office building. Steadily implement these alongside efforts to improve productivity in the Head Office District.
2) (1) Number of female managers: 50 (SMM employees) (2) Increase workplaces open to women and improve ratio of female employees (20% or higher at Japanese sites)	<ul style="list-style-type: none"> As of March 31, 2021, there were: (1) 11 female managers, and (2) 18% female employees. 	<ul style="list-style-type: none"> Transform the awareness of female employees and their supervisors. 	(1) Target 20 female managers by March 31, 2023. (2) Formulate action plans for 11 Group companies by March 31, 2022, ahead of when revisions to the Act on the Promotion of Female Participation and Career Advancement in the Workplace make it mandatory in April 2022.
3) Expand number of managerial track employees of foreign nationality	<ul style="list-style-type: none"> One employee of foreign nationality has been hired in FY2021. In FY2020, two new graduates and one mid-career employee of foreign nationality were hired. 	<ul style="list-style-type: none"> While each business division is addressing globalization, the response by the personnel departments will be strengthened going forward. 	<ul style="list-style-type: none"> Survey the foreign national recruitment needs of each division. Formulate a Group-wide policy for recruiting employees of foreign nationality, recruitment conditions, division assignments, and education plans for after joining the Group based on the results of this survey, and reflect these in recruitment activities.
4) Percentage of employees with disabilities: 3% or higher	<ul style="list-style-type: none"> As of April 2021, the percentage of employees with disabilities was 2.56% (legally required percentage: 2.3%). Internships were given to three students from Tsukuba University of Technology (Japan's only national university for people with disabilities). 	<ul style="list-style-type: none"> Continue recruitment activities aimed at achieving a 3% employment rate and provide thorough support to help employees with disabilities to stay with the Company, such as individual interviews after joining. 	<ul style="list-style-type: none"> Advance internship initiatives for new graduates with disabilities (hearing impairments and developmental disabilities).
5) Assign jobs and provide support matched to employees' life stages	<ul style="list-style-type: none"> Childcare: We held seminars for both men and women on balancing work with family commitments and in the period up to March 31, 2021, 12 male employees took childcare leave. Nursing care: We held lectures by external experts. 	<ul style="list-style-type: none"> Continue to actively carry out initiatives that support employees in coping with life events, such as childcare, nursing care, and recovery from illness, so that they can demonstrate their full abilities. 	<ul style="list-style-type: none"> Childcare: Continue FY2020 activities. Nursing care: Hold briefings explaining SMM's systems in addition to lectures by external experts. Recovery from illness: Identify issues related to balancing recovery with work and propose ideas for addressing these.

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
2. Support employees' mental and physical health 1) Halve the number of people found to require support in stress checks 2) Percentage of employees with abnormal findings indicated in health checkups: 50% or lower	1) The number of people found to require support in FY2020 was 211, or 6.9% of all employees who took stress checks. 2) The percentage of employees in our Group with abnormal findings indicated in health checkups in FY2020 was 58.9%.	1) Steadily reduce the number of employees suffering from illnesses through initiatives to improve working environment at each workplace. 2) Lower the percentage of employees with abnormal findings.	1) (1) Aim for 6.0% for the two years from FY2021 to FY2022. (2) Provide feedback from each type of check as necessary to prevent illnesses in advance. (3) Use the Work-life Support Desk to respond to individual situations. 2) Work with the health insurance union to provide individual guidance for employees with a high risk of developing lifestyle-related diseases and support for quitting smoking as health and productivity management initiatives.
3. Diversify opportunities to enhance the abilities of employees according to employee needs and work needs 1) Utilize one-on-one meetings that bring out the motivation and potential of every employee and boost the growth of subordinates through regular dialogues between superiors and subordinates 2) Reconstruct the human resources development program (in-house education, external education, etc.) to provide opportunities to employees to enhance their abilities in line with their roles 3) Provide opportunities for self-development matched to each employee's life plans and needs (correspondence courses, online training, etc.)	• We implemented training to cultivate in-house coaching instructors, which was taken by 48 employees. • Two executive officers and one general manager received coaching from a professional coach. • We started carrying out training online due to the COVID-19 pandemic. • We positioned brush-up training (MBA course) as self-improvement training and opened it up to regular employees who applied. • We revised which correspondence courses can be taken based on courses already taken and employees' needs. • Brush-up training was taken by 16 employees. • We carried out life plan training at 50 years old (62 employees) and 58 years old (86 employees).	• Develop in-house training on coaching and provide this training to each business site. • Hold one-on-one meetings. • Reconstruct the human resources development program. • Expand opportunities for employees to enhance their abilities. • Provide education and self-development programs that are accessible and appealing to employees. • Use IT to expand the ways in which employees can take training.	• Promote OJT in the Head Office District by enhancing communication between supervisors and their team members through one-on-one meetings (started with the personnel departments in May 2021 and being expanded to each Head Office division in stages). • Reconstruct the program for managerial track human resources development to correspond with the program for duty-based human resources development. • Execute touring JCO Study Center training that teaches the reinforcement of corporate organization by addressing driving factors (root causes). • Set up and launch a framework that supports recurrent education. • Carry out life plan training at 50 years old (74 employees) and 58 years old (116 employees) and release money planning training as e-learning.

Diverse Human Resources: Initiatives and Sustainability Data

SMM Group Policy on Human Rights

The SMM Group's policy on human rights, in accordance with the SMM Group Corporate Philosophy and the SMM Group Code of Conduct, has been established as follows.

- The SMM Group will comply with domestic laws and international standards relating to human rights and encourage persons within the Group, as well as outside parties over which the Group has influence, to work toward the realization of a society without human rights infringements.
- The SMM Group will not allow harassment or other incidents of a discriminatory nature within the Group and will make efforts to prevent such incidents from occurring among outside parties over which the Group has influence.
- The SMM Group will not engage in child labor or forced labor within the Group and will make efforts to prevent child labor or forced labor from occurring among outside parties over which the Group has influence.
- The SMM Group will show other considerations to human rights in addition to items 1-3 above within the Group and in relationships with outside parties over which the Group has influence.
- The SMM Group will establish appropriate measures and procedures for responding to human rights problems should they occur.
- The SMM Group will identify and stay aware of the current and changing state of human rights in the world, as well as the impact of corporations in the area of human rights, and carry out awareness-raising activities and other necessary measures on an ongoing basis.

Employee Human Rights Initiatives

We have positioned December as Human Rights Month and each year we carry out activities to educate all Group employees on human rights matters, such as the SMM Group Policy on Human Rights (total time dedicated to human rights-related training: 5,797 hours). Also, we started a three-year plan in FY2019 which includes the advancement of awareness-raising activities on the major theme of "accepting diversity and creating workplaces where all employees can work with spirit." In FY2020, we created an educational pamphlet covering the sub-theme of "considering things from other peoples' perspectives" which was distributed and used for training at each workplace.

We have also been setting up the Work-life Support Desk as a place where employees can more easily and effectively consult about various topics, such as harassment, balancing work with family commitments, and avoiding quitting work, and this initiative was launched in April 2021.

Diversity Initiatives

In addition to our established initiatives supporting the active participation of female employees, expanding the recruitment of people with disabilities, and recruiting people of foreign nationality, we are also developing new initiatives including measures to support employees at each life stage, such as making male employees aware of childcare leave and holding lectures on nursing care, as well as LGBT-awareness training for officers and management-level employees.

We have positioned childcare support as an issue that we should address for all employees, regardless of gender. In FY2020, we held briefing sessions on our systems for supporting the balancing of work and childcare twice in September and twice in February and these were attended by a total of 154 employees. Childcare leave was taken by 45 employees, including nine men.

■ Employment Ratio of Disabled People Over the Past Five Years (SMM non-consolidated, average employment ratio over each fiscal year)



We consider it to be of the utmost importance to support employees with disabilities to stay employed with the Company and in addition to holding regular interviews with disabled employees, we have also raised the employment ratio of disabled people through new initiatives such as offering internships to students with disabilities.

■ Current Situation Regarding Parental Leave (as of March 31, 2021) (SMM non-consolidated)

	Total	Male	Female
Employees with the right to take parental leave ¹	190	153	37
Employees who took parental leave	45	8	37
Employees who took parental leave during FY2020 and have since returned to work	24	6	18
Employees who were still working at the Company 12 months after returning from parental leave ²	13	1	12
Ratio of workers who returned after parental leave ³	21/22 (95.5%)	5/5 (100%)	16/17 (94.1%)
Retention rate of workers who returned after parental leave ⁴	13/13 (100%)	1/1 (100%)	12/12 (100%)

1. Out of employees who have notified the Company of a birth:
 Male employees—From the day of birth until the day before the child turns one year old.
 Female employees—From 56 days before the expected delivery date until the last day of the April immediately following the fiscal year (ending March 31) when the child becomes one year old (the day before their birthday), or the day the child becomes one and a half years old, whichever is longer.
 2. The number of employees who returned to work in FY2019 and were still working at the Company 12 months later.
 3. Return ratio: number of people who returned to work in FY2020 ÷ number of people who intended to return to work in FY2020 x 100.
 4. Retention rate: number of employees who returned to work in FY2019 and were still working at the Company 12 months later ÷ number of employees who returned to work in FY2019 x 100.

Development and Participation of Human Resources: Initiatives

Initiatives for Securing, Developing, and Making the Most of Human Resources

We are securing the employees we need through various initiatives. This includes recruiting new graduates by focusing on publicity activities at an early stage and holding internships and workplace observations at Niihama District, as well as holding online briefings and sharing videos. We are also actively working to recruit mid-career employees.

Our human resources development is based on OJT and includes the SMM Middle Management Program which aims to cultivate candidates for top management positions, the Mining School where resource engineers learn operational fundamentals and skills through OJT at the Hishikari Mine, and the Smelting & Refining University where metallurgy engineers learn the fundamentals of refining technologies. We also encourage employees to develop themselves by providing self-development and education courses through e-learning and correspondence courses.

Officers' Coaching Schools

We launched the Officers' Coaching Schools in 2014 as a program that allows Company officers and school students to mutually inspire one another and consider self-development. With a director, deputy director, and 8 to 10 students, each self-regulated school makes a report once a year. In total, there are five schools divided into the broad categories of: project promotion, sales, corporate operations, management and accounting, and manufacturing and development tech-

nology. Every year, each school separately determines the themes they will address and endeavors to foster skills for thoroughly thinking problems through, learning cooperatively, and putting strategies into practice in the workplace.

The Shikinen Kaikaku Project (The Fixed Period Reform Project)

The *Shikinen Kaikaku* Project involves the fixed period, mandatory application of a scrap and build process (inspired by the *Shikinen Sengu* ritual*) to the Group's core technologies, programs, and operational systems with the following aims: (1) Swiftly and voraciously identifying and absorbing social and environmental changes, technological trends, and other movement in society and reflecting these in the Group's management (transformation), (2) regularly reviewing and exploring existing technologies, programs, and systems in-depth to gain a fundamental understanding so the Group's technology and culture can be passed down to future generations (legacy), and (3) providing a venue for the focused development of human resources (education). We appoint future leadership candidates as project leaders to provide them with practical experience on various themes which they cannot gain through off-the-job training. We believe this will lead to even greater growth.

* *Shikinen Sengu*: A ritual held about every 20 years at Ise Jingu Shrine and other shrines in which the divine palace and its sacred apparel, furnishings, and divine treasures are completely remade and the enshrined deity is moved to the new sanctuary.

Annual hours of education per employee (FY2020)

	Officers		Managers		Regular employees		Occasional employees and temporary employees	Total
	Male	Female	Male	Female	Male	Female		
Annual hours of education per employee (average)	7.6	0.0	22.0	10.0	23.8	17.1	13.5	20.8
Number of officers and employees at the end of the fiscal year	110	0	986	96	4,720	1,175	1,205	8,292

8 Engagement with Stakeholders

Communications Subcommittee: For details on our subcommittee framework, etc., see p. 64–65.

Approach and Policy

We are working to ensure that our diverse shareholders correctly understand the true size of the Group and encouraging them to share in our goal of becoming the world leader in the non-ferrous metals industry. We have identified the groups of stakeholders who affect or are affected by the Group as customers, shareholders, employees, local communities, creditors, business partners, civil society organizations, and government agencies. We have set targets for how we should engage with each of these groups, and we are advancing various initiatives to achieve these targets.

Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company that is appreciated and understood to be the world leader in non-ferrous metals

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
1. Further penetrate our Group brand among employees • Improve results of employee awareness survey (increase ratio of employees who feel pride in working at the Company)	• We created branding development tools including main visuals for advertisements, name cards, envelopes, clear files, and company brochures. • We sorted out and shared issues with the relevant departments in preparation to raise brand profile within the Group.	• Arrange the positioning of activities to raise brand profile within the Group and create an implementation structure through cooperation between departments. • Cooperate with each business site on brand development proposals for sites across Japan.	• Unify visual representation, such as signs, at all business sites in Japan and create guidelines. • Systemize concepts and policies for raising brand profile within the Group and formulate and execute brand proliferation measures. • Carry out an employee awareness survey once every three years.
2. Ensure quality and quantity in communication of information at the level of "world leader in the non-ferrous metals industry" • Earn a high reputation for the integrated report from outside the Company (including hearings with shareholders and investors, and improvements in questionnaire and evaluation results)	• Integrated Report 2020 was released in both Japanese and English. It received the Bronze Award at the WICI Japan Integrated Reporting Awards 2020.	• Build stories that communicate a consistent integrated approach. • Strengthen the connectivity between business strategy and sustainability information. • Incorporate trends that are of great interest to stakeholders, such as climate change or human rights in business, into articles.	• Explain the Group's value creation in a way that shows the connections between combining sustainability and business, risks and opportunities in the business environment, competitiveness and delivering value, and our business model and strategies.
3. Increase in recognition and understanding of our goal of "world leader in the non-ferrous metals industry" • Improvement in findings of surveys by external bodies (degree of recognition and understanding, etc.)	• In our mass media advertising, we raised awareness among business people by combining advertising media in response to change, such as adopting digital advertising during the pandemic. • We issued effective articles on themes that are of great interest to the public, such as the SDGs, DX, and battery materials.	• Revise where we place advertising based on a deep exploration of our target audiences and the amount of exposure provided by each type of media. • Implement an active public relations PDCA cycle and increase the number of articles published according to our strategy.	• Strengthen TV advertising, which provides a greater chance of connecting with target audiences, and utilize web advertising. • Implement an active public relations PDCA cycle and increase effective media exposure according to our strategy.

Initiatives

List of Main External Awards (FY2020)

Awards	Date	Recipient	Award received for
Japan Mining Industry Association Engineering Award	2020/6	Sumitomo Metal Mining Co., Ltd., Non-Ferrous Metals Division	This award was given in recognition of a presentation given at a conference for people responsible for mining, smelting, and refining business sites across Japan which introduced a collaborative improvement initiative by business sites and maintenance departments that aimed to improve the capacity of automated equipment for stripping starting sheets at Niihama Nickel Refinery, as well as activities that contribute to improving working environments.
45th Mining and Materials Processing Institute of Japan Thesis Award	2020/9	Sumitomo Metal Mining Co., Ltd., Technology Division	This award was presented for Development of Recycling Process for Copper-Gallium Target, a thesis compiling research on a process for recovering gallium, a rare metal, from the target scrap produced in the manufacturing process of CIGS solar cells.
FY2020 Governor's Award for Environmental Conservation Work (Environmental Conservation Category)	2020/9	Sumitomo Metal Mining Co., Ltd., Technology Division	This is an award presented by the governor of Hyogo Prefecture which recognizes employees who engage in the management of specified air and water quality management facilities and environmental monitoring and reporting operations, and who also serve for a long time on organizations such as the Hyogo Prefectural Environmental Conservation Management Association's water quality and waste subcommittees.
The Japan Society for Analytical Chemistry Medal of Merit	2020/9	Sumiko Techno-Research Co., Ltd.	This award is given to individuals who have amassed long-term research results in chemical analysis or in the maintenance of chemical instruments and equipment. The work of two employees was recognized with the Medal of Merit.
Special Commendation by the Head of the Akita Prefectural Labor Bureau (for Safety Measures)	2020/10	SMM Precision Co., Ltd.	This award recognizes long-term health and safety efforts by SMM Precision, including its continuous risk assessment activities and the fact it has not had a single accident resulting in one day or more of lost working time in the 20 years since its founding.
The Catalyst Manufacturers Association Japan (CMAJ) 2020 Technology Award	2020/10	Nippon Ketjen Co., Ltd.	Nippon Ketjen received the CMAJ Technology Award in recognition of the development and commercialization of a next-generation catalyst system with excellent performances for residue hydrotreating in petroleum refining process.
Encouragement Award from the Head of the Fukushima Prefectural Labor Bureau (for Safety Measures)	2020/11	Sumiko Energy Materials Co., Ltd.	This award was given based on a high appraisal of the occupational health and safety activities carried out by Sumiko Energy Materials to date, including its swift response to safety issues, its visualization of the findings of safety patrols, and the fact it has not had a single accident resulting in lost working time in the four years since its founding.
2020 Presidential Mineral Industry Environmental Award, PMIEA	2021/3	Coral Bay Nickel Corporation and Taganito HPAL Nickel Corporation	This is the highest honor that can be awarded in the Philippine mining industry. It is given to companies that score highly on a comprehensive assessment of factors including environmental and safety management at plants, conservation of local environments, and contribution to local communities. This is the sixth time Coral Bay Nickel Corporation has received the award and the first time for Taganito HPAL Nickel Corporation.

Communication with Shareholders and Investors

The SMM Group strives to provide our shareholders and investors with the information we think they need in a timely, appropriate, fair, and easy-to-understand manner.

On our website, we share our latest announcements, management policies and strategy, business descriptions, business results, financial information, and other information. In March 2021, we carried out a complete renewal of the website to further enhance the information provided, adding content such as pages on sustainability and for individual investors. We also deliver reports to shareholder twice a year and report on financial results and the progress of business strategies.

We have also formulated an IR Policy to ensure IR activities are implemented appropriately, which is publicly available on

our website. Twice a year, after the announcements of our financial results, the president and general managers of business divisions give Business Strategy Progress Briefing Sessions for institutional investors and securities analysts. In December 2020, we held an IR Day which included business briefings for institutional investors. We are also actively working to share IR information with individual investors through efforts such as holding briefings several times a year. We are even actively working to provide information and enhance dialogue during the COVID-19 pandemic and in FY2020, we held all the briefings described above online and also released information such as videos and meeting records through our website.

We will continue working to win the trust and meet the expectations of all shareholders and investors.

9 Co-Existence and Mutual Prosperity with Local Communities

Corporate Citizenship Subcommittee: For details on our subcommittee framework, etc., see p. 64–65.

Approach and Policy

We think it is important that we engage with communities in the areas in which we do business through dialogue to find out what issues they are facing and to see how we can contribute to solving these issues. We will also vitalize regional economies hiring and procuring locally and continue to support areas that have been affected by major natural disasters such as earthquakes and typhoons.

Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company that contributes to regional development and earns trust as a member of the local community

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
Participate in local communities through dialogue and collaboration Accurately identify local issues through dialogues with local communities, and execute the following measures.	We collected information from organizations we think we can collaborate with, such as the Central Community Chest of Japan, the Japan Business Federation (Keidanren), and NPO organizations, regarding what regional social issues we should be contributing to addressing.	Get a more concrete understanding of regional social issues in order to achieve our Vision for 2030.	Get an understanding of regional social issues we should be contributing to addressing together with government, local bodies, and NPOs we think we can collaborate with, analyze existing efforts in the social contribution activity database, and share our vision.
1. Support the local community via employee participation • Implement employee participation programs (from 2023)	Head Office: Activities to collect PET bottle caps, collect used stamps, collect used books, and donate their sales, etc. Business sites: Employees participated in local support activities. E.g., tree planting, shoreline cleaning, cleaning areas around plants.	Share examples of initiatives in which employees can participate in on a voluntary basis. E.g., blood donation, consuming foods from disaster-hit areas, used book charity for children.	(1) Investigate case studies of employee participation programs at other companies and then consider trial programs that are a good fit for the Group. (2) Take actions to increase participation and ensure continuity of currently ongoing initiatives such as by publicizing in in-house bulletins and so on.
2. Hire and procure locally • Continually implement and assess of performance	We gained an understanding of the employment and procurement situation at our main business sites and disclosed it as sustainability data in our Integrated Report.		Continue current activities.
3. Support for nurturing of the next generation 1) Implement programs to nurture the next generation in collaboration with government, local bodies, NPOs, etc. (one or more times/year) 2) Establish and award scholarships in Japan (from 2023) and maintain existing overseas scholarships	Head Office: Continued making donations to NPO Kaibigan in the Philippines. Business sites: Carried out initiatives supporting students and children. E.g., donating picture books on minerals, sending employees to elementary schools to teach about companies. Head Office: We explored how to establish scholarships in Japan through either a public interest incorporated foundation or a charitable trust format. Overseas: Continued the SMM Arizona (Morenci), Pogo (existing scholarships only), and SMM Oceania (Northparkes) programs.	(1) Trial programs that are a good fit for the Group. (2) Collect information from other companies.	(1) Get an understanding of issues and needs we should be addressing together with government, local bodies, and NPOs we think we can collaborate with and consider programs that are a good fit for the Company. (2) Collect case studies of other companies and consider programs that are a good fit for the Group. Advance considerations about which format is appropriate for the Group and carry out procedures to establish scholarships.

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
4. Support for people with disabilities and the elderly <ul style="list-style-type: none"> Implement programs to support people with disabilities and the elderly in collaboration with government, local bodies, NPOs, etc. (one or more times/year) 	Head Office: Currently holding discussions with the Personnel Department about providing support through transition support for employment offices for students with developmental disabilities who have IT skills. Business sites: Collaborated with organizations that support people with disabilities. E.g., making novelty items, providing cloth for use as cleaning clothes, helping sign language interpreters stay in work.	(1) Trial programs that are a good fit for the Group. (2) Share information from existing initiatives about organizations we think we can collaborate with or ideas that can be applied at our business sites. E.g., donating stockpile items to food banks.	(1) Get an understanding of the issues and needs of local elderly people and people with disabilities and consider programs that are a good fit for the Group. (2) Share case studies of initiatives at other business sites in a timelier manner through subcommittee members.
5. Support during disasters <ul style="list-style-type: none"> Support regions affected by large-scale disasters 	(1) We made donations to the Japanese Red Cross Society and Isa, Kagoshima Prefecture, following in the Heavy Rain Event of July 2020. (2) We provided support for responses to the COVID-19 pandemic. (3) We donated to a fund providing support for the education of children who were orphaned because of the Great East Japan Earthquake.		Collaborate with the relevant regions to provide support at an appropriate scale and timing for each situation.

Initiatives

Social Contribution Activities in FY2020

We carried out a range of activities as shown in the Results section of the table above.



A poster promoting the consumption of foods made in areas affected by the Great East Japan Earthquake in order to support these areas. (Employee cafeteria)



Donating picture books on minerals to Isa, Kagoshima Prefecture.



A novelty item that was commissioned by SMM from an employment support facility for people with disabilities.

Communication with Local Communities and NGOs

We work to raise the direct contribution we make to the local economy through measures such as recruiting from areas surrounding our business site and procuring from local suppliers, and we also contribute to improving the lifestyles of these communities, particularly in emerging nations, by providing infrastructure such as roads and ports, and building and operating public facilities such as schools, hospitals, and marketplaces. When implementing these measures, we establish opportunities

for regular communication with local communities and move forward while also checking the requirements of local citizens. Additionally, twice a year we hold exchanges of opinion with the international environmental NGO Friends of the Earth Japan (FoE Japan) regarding their findings on topics such as the water quality of rivers around Coral Bay Nickel Corporation and Taganito HPA Nickel Corporation plants in the Philippines, and we implement necessary improvement measures that reference the Group's opinions and recommendations.

10 Rights of Indigenous Peoples

Human Rights Subcommittee: For details on our subcommittee framework, etc., see p. 64–65.

Approach and Policy

When developing mines, it is particularly important to proceed with the understanding of the indigenous people who live on the land. We collaborate with local governments and other organizations, using international standards such as the United Nations Declaration on the Rights of Indigenous Peoples as references, while also maintaining an ongoing dialogue with local indigenous peoples based on an understanding of their traditions and cultures.

Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company that understands and respects the traditions and culture of indigenous peoples

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
1. Understand indigenous peoples and their traditions and culture <ul style="list-style-type: none"> Percentage of SMM Group sites implementing in-house education: 100% by the end of FY2023 	We created basic in-house educational materials based on guidance from experts (distributed internally in the first half of FY2021).	Consider educational materials that will deepen understanding of indigenous peoples and their traditions and cultures.	Maintain relationships with experts in order to create educational materials that will deepen understanding of indigenous peoples and their traditions and cultures.
2. Support initiatives that lead to respect for the traditions and cultures of indigenous peoples <ol style="list-style-type: none"> Provide scholarships for indigenous peoples (continue existing initiatives) Support indigenous people-related initiatives by NGOs, academic societies, etc.: one initiative or more each year 	We continued to provide scholarships for local people, including indigenous people, in the Philippines. Due to the impact of the COVID-19 pandemic, the large events that need supporting could not be held.	Arrange initiatives targeting indigenous peoples in regions where we conduct business. Gather information on the holding of events.	Investigate the need for scholarships among indigenous peoples and devise plans in accordance with the local situation. Maintain relationships with experts, strive to gather information about events being held, and support these events as appropriate.

Initiatives

Creating In-house Educational Materials

We created video materials that use case studies from within the Group to explain who indigenous people are and how the Group should handle indigenous rights. These will enable employees to understand it is an issue that concerns us all.

We carried out dialogue with experts* for about a year and received guidance that helped to ensure the content of the materials is fair.

The materials have been distributed within the Group in the first half of FY2021 through e-learning and other methods.

* Keiichi Omoto (emeritus professor of anthropology at the University of Tokyo), Tomoaki Nishihara (specially appointed professor at Seisa University), Eiichiro Noguchi (coordinator of the NGO Taiga Forum)



A scene featuring an explanation by Professor Nishihara

Côté Gold Project (Canada) Initiatives

We worked with our development partner IAMGOLD Corporation to get the understanding of the project by the First Nation peoples affected by the project. We have fostered relationships of mutual trust and understanding with the organization through action such as providing explanations before gaining approvals, holding ongoing dialogue, and participating in initiatives such as cultural workshops hosted by the organization, and as a result, we were able to conclude an Impact Benefit Agreement.



The concluded Impact Benefit Agreement

11 Human Rights in the Supply Chain

Human Rights Subcommittee: For details on our subcommittee framework, etc., see p. 64–65.

Approach and Policy

In our supply chains, we monitor risk related to human rights and labor, compliance, quality assurance, and environment and local communities based on international standards and in accordance with the SMM Group Responsible Sourcing Policy. Should any issues occur, they are corrected. In regard to the sourcing of minerals in particular, we carry out activities with respect to OECD guidances and in accordance with the SMM Group Responsible Mineral Sourcing Policy.

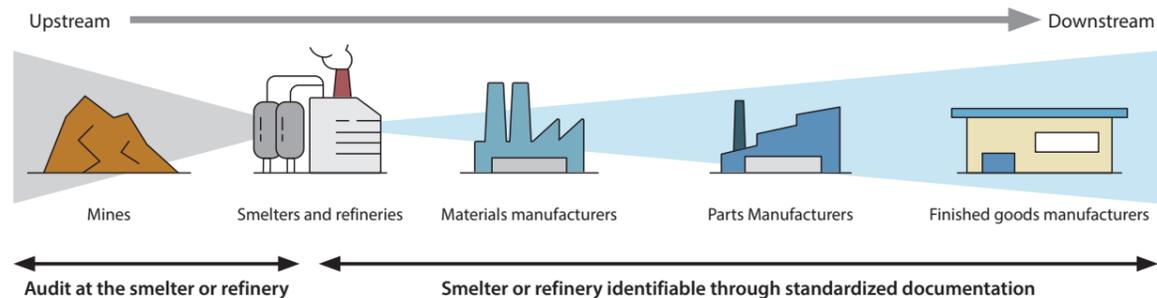
Vision for 2030, KPIs, Results, and Action Plans

Vision for 2030: A company that undertakes responsible sourcing across the supply chain

KPIs (Indicators and Goals)	Results	Issues	FY2021 Action Plan
<p>Promote responsible sourcing, particularly responsible mineral sourcing</p> <p>1. Responsible mineral sourcing 1) Establish a responsible mineral sourcing management system in line with international standards by the end of FY2021 2) Zero mines or smelters and refineries complicit in child labor or other infringements of human rights in the supply chain</p>	<p>At Niihama Nickel Refinery and Harima Refinery, we received third-party audits for responsible mineral sourcing.</p>	<p>Responsible mineral sourcing activities that are expanding in areas such as minerals targeted and scope of risk need to be objectively checked.</p>	<p>Acquire third-party certification according to standards set by an international organization for the Group's main metals products.</p>
<p>2. Responsible sourcing 1) Business partners that have received and agreed with the SMM Group Responsible Sourcing Policy: 100% by the end of FY2030 2) Establish a responsible sourcing management system in line with international standards by the end of FY2024 3) Continue implementing due diligence (DD)</p>	<p>We established the SMM Group Responsible Sourcing Policy and extended it to our main suppliers. Out of these suppliers, 99% agreed with the policy.</p>	<p>Establish management systems in line with international standards and carry out due diligence.</p>	<p>Investigate suppliers as part of due diligence in line with international standards.</p>

Responsible mineral sourcing framework advanced by the Responsible Minerals Initiative (RMI), an international initiative for responsible mineral sourcing

For supply chains that cover a lot of area from upstream to downstream, this framework enables effective responsible mineral sourcing by using smelters and refineries, which are relatively few in number, as the dividing point for upstream and downstream initiatives.



Initiatives

SMM Group Responsible Sourcing Policy

The SMM Group carries out sourcing activities that take into account human rights and labor, compliance, quality assurance, and environment and local communities based on the SMM Group Corporate Philosophy.

WEB https://www.smm.co.jp/en/sustainability/management/csr_procurement/

Formulating Sourcing Policy and Extending These to Suppliers

The SMM Group Responsible Sourcing Policy was established and announced in April 2020 to clarify our Group stance toward building a sustainable supply chain that takes into consideration social issues such as human rights and environmental issues in all aspects of our sourcing activities.

Not only do our Group officers and employees thoroughly comply with this policy, we ensure all our suppliers also understand this policy.

In FY2020, we requested agreement with the policy from both suppliers that account for 90% of procurement costs and important suppliers to business divisions and business sites, for a total of 305 companies. As of the end of FY2020, 99% of these suppliers had agreed.

We will continue to build a due diligence framework based on this policy.

SMM Group Responsible Mineral Sourcing Policy

Pursuant to the SMM Group Policy on Human Rights, we do not buy minerals that may be associated with human rights violations such as child labor or forced labor, environmental destruction, illegal mining, or corruption, or minerals that may be used as a source of funding for armed groups or other such organizations. We respect the guidance established by the OECD regarding mineral sourcing, and we exercise appropriate influence over suppliers as we work for responsible mineral sourcing throughout the entire supply chain.

Responsible Mineral Sourcing

Minerals mined from the Democratic Republic of the Congo and nine surrounding countries (tin, tantalum, tungsten and gold (3TG)) are subject to tighter regulations as "conflict minerals" that serve to fund armed groups and child labor, forced labor and other human rights violations, and supply a catalyst for the expansion and prolonging of conflict.

In recent years, due to rising public demand, the list of minerals subject to regulation has been expanded to include cobalt, copper, and nickel among others, and the scope of

risks that should be addressed also includes environmental and community risks in addition to human rights.

To ensure that the smelting and refining of gold at SMM does not make use of these conflict minerals, since FY2012, we have been operating in accordance with guidance from the London Bullion Market Association (LBMA) and undergo periodic third-party audits. In FY2018, we also began operating in accordance with guidance from the LBMA with respect to silver.

Furthermore, in March 2020, two of our business sites that produce cobalt (Niihama Nickel Refinery and Harima Refinery) received third-party audits in accordance with RMI* standards.

Going forward, we will ensure that other responsible mineral sourcing initiatives at business sites that produce our main metal products, such as copper and nickel, are inspected from an objective perspective.

Additionally, when the Smelting and Refining Business selects a new mine as a supplier, we assess how that mine carries out environmental management, including management of water resources and tailings dams. In FY2020, there were no new suppliers selected.

* Responsible Minerals Initiative (RMI): An international initiative on the responsible sourcing of minerals by the Responsible Business Alliance (RBA), an organization founded in 2004 for the purpose of promoting a common code of conduct in the world's electronic equipment industry.



LBMA Responsible Gold Certificate